

Alignment

; Sequence 1, Application US/09738626
; Publication No. US20020197605A1
; APPLICANT: NAKAGAWA, SATOSHI
; APPLICANT: MIZOGUCHI, HIROSHI
; APPLICANT: ANDO, SEIKO
; APPLICANT: HAYASHI, MIKIRO
; APPLICANT: OCHIAI, KEIKO
; APPLICANT: YOKOI, HARUHIKO
; APPLICANT: TATEISHI, NAOKO
; APPLICANT: SENOH, AKIHIRO
; APPLICANT: IKEDA, MASATO
; APPLICANT: OZAKI, AKIO
; TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
; CURRENT APPLICATION NUMBER: US/09/738,626
; CURRENT FILING DATE: 2000-12-18
; PRIOR APPLICATION NUMBER: JP 99/377484
; PRIOR FILING DATE: 1999-12-16
; PRIOR APPLICATION NUMBER: JP 00/159162
; PRIOR FILING DATE: 2000-04-07
; PRIOR APPLICATION NUMBER: JP 00/280988
; PRIOR FILING DATE: 2000-08-03

Query Match 100.0%; Score 3010; DB 10; Length 3309400;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 3010; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 ATTGCGGGGCTTACTGCGCTGATGGGTTCTGCGTTTATTACCTCTTCGTTGTTTATTTA 60
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Db 2791990 ATTGCGGGGCTTACTGCGCTGATGGGTTCTGCGTTTATTACCTCTTCGTTGTTTATTTA 2792049

Qy      61 GGCCCGCTCTCTGCCGCTGCGATTGCTGCAACAGCAGTTGGTTTCACTGGTGGTTTGCTT 120
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Db 2792050 GGCCCGCTCTCTGCCGCTGCGATTGCTGCAACAGCAGTTGGTTTCACTGGTGGTTTGCTT 2792109

Qy     121 GCCCGTCGATTCTTGATTCCACCGTTGATTGTGGCGATTGCCGGCATCACACCAATGCTT 180
      |||||||
Db 2792110 GCCCGTCGATTCTTGATTCCACCGTTGATTGTGGCGATTGCCGGCATCACACCAATGCTT 2792169

Qy     181 CCAGGTCTAGCAATTTACCGCGGAATGTACGCCACCCTGAATGATCAAACACTCATGGGT 240
      |||||||
Db 2792170 CCAGGTCTAGCAATTTACCGCGGAATGTACGCCACCCTGAATGATCAAACACTCATGGGT 2792229

Qy     241 TTCACCAACATTGCGGTTGCTTTAGCCACTGCTTCATCACTTGCCCGTGCGGTGGTTTG 300
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Db 2792230 TTCACCAACATTGCGGTTGCTTTAGCCACTGCTTCATCACTTGCCCGTGCGGTGGTTTG 2792289

Qy     301 GGTGAGTGGATTGCCCGCAGGCTACGTCGTCCACCACGCTTCAACCCATACCGTGCATTT 360
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Db 2792290 GGTGAGTGGATTGCCCGCAGGCTACGTCGTCCACCACGCTTCAACCCATACCGTGCATTT 2792349

Qy     361 ACCAAGGCGAATGAGTTCTCCTTCCAGGAGGAAGCTGAGCAGAATCAGCGCCGGCAGAGA 420
      |||||||
Db 2792350 ACCAAGGCGAATGAGTTCTCCTTCCAGGAGGAAGCTGAGCAGAATCAGCGCCGGCAGAGA 2792409

Qy     421 AAACGTCCAAAGACTAATCAGAGATTCCGGTAATAAAAGGTAAAAATCAACCTGCTTAGGC 480
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Db 2792410 AAACGTCCAAAGACTAATCAGAGATTCCGGTAATAAAAGGTAAAAATCAACCTGCTTAGGC 2792469

Qy     481 GTCTTTCGCTTAAATAGCGTAGAATATCGGGTCGATCGCTTTTAAACACTCAGGAGGATC 540
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Db 2792470 GTCTTTCGCTTAAATAGCGTAGAATATCGGGTCGATCGCTTTTAAACACTCAGGAGGATC 2792529

Qy     541 CTTGCCGGCCAAAATCACGGACACTCGTCCACCCAGAAATCCCTTCACGCTGTTGAAGA 600
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Db 2792530 CTTGCCGGCCAAAATCACGGACACTCGTCCACCCAGAAATCCCTTCACGCTGTTGAAGA 2792589

Qy     601 GGAAACCGCAGCCGGTGCCCGCAGGATTGTTGCCACCTATTCTAAGGACTTCTTCGACGG 660
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Db 2792590 GGAAACCGCAGCCGGTGCCCGCAGGATTGTTGCCACCTATTCTAAGGACTTCTTCGACGG 2792649
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Qy 661 CGTCACTTTGATGTGCATGCTCGGCGTTGAACCTCAGGGCCTGCGTTACACCAAGGTCGC 720
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Qy 721 TTCTGAACACGAGGAAGCTCAGCCAAAGAAGGCTACAAAGCGGACTCGTAAGGCACCAGC 780
 Db 2792710 TTCTGAACACGAGGAAGCTCAGCCAAAGAAGGCTACAAAGCGGACTCGTAAGGCACCAGC 2792769

Qy 781 TAAGAAGGCTGCTGCTAAGAAAACGACCAAGAAGACCACTAAGAAACTACTAAAAAGAC 840
 Db 2792770 TAAGAAGGCTGCTGCTAAGAAAACGACCAAGAAGACCACTAAGAAACTACTAAAAAGAC 2792829

Qy 841 CACCGCAAAGAAGACCACAAAGAAGTCTTAAGCCGGATCTTATATGGATGATTCCAATAG 900
 Db 2792830 CACCGCAAAGAAGACCACAAAGAAGTCTTAAGCCGGATCTTATATGGATGATTCCAATAG 2792889

Qy 901 CTTTGTAGTTGTTGCTAACCGTCTGCCAGTGGATATGACTGTCCACCAGATGGTAGCTA 960
 Db 2792890 CTTTGTAGTTGTTGCTAACCGTCTGCCAGTGGATATGACTGTCCACCAGATGGTAGCTA 2792949

Qy 961 TAGCATCTCCCCAGCCCCGGTGGCCTTGTACGGGGCTTTCCCCCGTTCTGGAACAACA 1020
 Db 2792950 TAGCATCTCCCCAGCCCCGGTGGCCTTGTACGGGGCTTTCCCCCGTTCTGGAACAACA 2793009

Qy 1021 TCGTGGATGTTGGGTGGATGGCTGGAAGTGTAGATGTTGCACCCGAACCATTTGGAAC 1080
 Db 2793010 TCGTGGATGTTGGGTGGATGGCTGGAAGTGTAGATGTTGCACCCGAACCATTTGGAAC 2793069

Qy 1081 AGATACGGGTGTTTTGCTGCACCTGTTGTCTCACTGCAAGTGACTATGAAGGCTTCTA 1140
 Db 2793070 AGATACGGGTGTTTTGCTGCACCTGTTGTCTCACTGCAAGTGACTATGAAGGCTTCTA 2793129

Qy 1141 CGAGGGCTTTTCAAACGCAACGCTGTGGCCTCTTTTCCACGATCTGATTGTTACTCCGGT 1200
 Db 2793130 CGAGGGCTTTTCAAACGCAACGCTGTGGCCTCTTTTCCACGATCTGATTGTTACTCCGGT 2793189

Qy 1201 GTACAACACCGATTGGTGGCATGCGTTTCGGGAGGTAAACCTCAAGTTCGCTGAAGCCGT 1260
 Db 2793190 GTACAACACCGATTGGTGGCATGCGTTTCGGGAGGTAAACCTCAAGTTCGCTGAAGCCGT 2793249

Qy 1261 GAGCCAAGTGGCGGCACACGGTGCCACTGTGTGGGTGCAGGACTATCAGCTGTTGCTGGT 1320
 Db 2793250 GAGCCAAGTGGCGGCACACGGTGCCACTGTGTGGGTGCAGGACTATCAGCTGTTGCTGGT 2793309

Qy 1321 TCCTGGCATTTTGCGCCAGATGCGCCCTGATTTGAAGATCGGTTTCTTCTCCACATTCC 1380
 Db 2793310 TCCTGGCATTTTGCGCCAGATGCGCCCTGATTTGAAGATCGGTTTCTTCTCCACATTCC 2793369

Qy 1381 CTTCCCTTCCCCTGATCTGTTCCGTCAGCTGCCGTGGCGTGAAGAGATTGTTTCGAGGCAT 1440
 Db 2793370 CTTCCCTTCCCCTGATCTGTTCCGTCAGCTGCCGTGGCGTGAAGAGATTGTTTCGAGGCAT 2793429

Qy 1441 GCTGGGCGCAGATTTGGTGGGATTCCATTTGGTTCAAACGCAGAAAACCTTCCCTTGCCTT 1500
 Db 2793430 GCTGGGCGCAGATTTGGTGGGATTCCATTTGGTTCAAACGCAGAAAACCTTCCCTTGCCTT 2793489

Qy 1501 AATCCAGCAGGTTGCCGGCACTGCCGGTCTCATGTGGGTGAGCCGACACCTTGCAGGT 1560
 Db 2793490 AATCCAGCAGGTTGCCGGCACTGCCGGTCTCATGTGGGTGAGCCGACACCTTGCAGGT 2793549

Qy 1561 CAGTGGTGAAGCATTGGTGCCTGAGATTGGCGCTCATGTTGAAACCGCTGACGGAAGGCG 1620
 Db 2793550 CAGTGGTGAAGCATTGGTGCCTGAGATTGGCGCTCATGTTGAAACCGCTGACGGAAGGCG 2793609

Qy 1621 AGTTAGCGTGGGGCGGTTCCCGATCTCGATTGATGTTGAAATGTTTGGGGAGGCGTCGAA 1680
 Db 2793610 AGTTAGCGTGGGGCGGTTCCCGATCTCGATTGATGTTGAAATGTTTGGGGAGGCGTCGAA 2793669

Qy 1681 AAGCGCCGTTCTTGATCTTTTAAAAACGCTCGACGAGCCGAAACCGTATTCTTGGGCGT 1740
 Db 2793670 AAGCGCCGTTCTTGATCTTTTAAAAACGCTCGACGAGCCGAAACCGTATTCTTGGGCGT 2793729

Qy 1741 TGACCGACTGGACTACACCAAGGGCATTGTCAGCGCCTGCTTGCCTTTGAGGAACTGCT 1800
 Db 2793730 TGACCGACTGGACTACACCAAGGGCATTGTCAGCGCCTGCTTGCCTTTGAGGAACTGCT 2793789

Qy 1801 GGAATCCGGCGCGTTGGAGGCCGACAAAGCTGTGTTGCTGCAGGTGCGGACGCTTCGCG 1860
 Db 2793790 GGAATCCGGCGCGTTGGAGGCCGACAAAGCTGTGTTGCTGCAGGTGCGGACGCTTCGCG 2793849

Qy 1861 TGAGCGCATTGATCACTATCGTGTGTCGCGTTTCGCAGGTCGAGGAAGCCGTCGGCCGTAT 1920
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 Db 2793850 TGAGCGCATTGATCACTATCGTGTGTCGCGTTTCGCAGGTCGAGGAAGCCGTCGGCCGTAT 2793909

Qy 1921 CAATGGTCGTTTCGGTCGCATGGGGCGTCCCGTGGTGCATTATCTACACAGGTCATTGAG 1980
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 Db 2793910 CAATGGTCGTTTCGGTCGCATGGGGCGTCCCGTGGTGCATTATCTACACAGGTCATTGAG 2793969

Qy 1981 CAAAAATGATCTCCAGGTGCTGTATACCGCAGCCGATGTCATGCTGGTTACGCCTTTTAA 2040
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 Db 2793970 CAAAAATGATCTCCAGGTGCTGTATACCGCAGCCGATGTCATGCTGGTTACGCCTTTTAA 2794029

Qy 2041 AGACGGTATGAACCTTGGTGGCTAAAGAATTTCGTGGCCAACCACCGCAGCGCACTGGTGC 2100
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 Db 2794030 AGACGGTATGAACCTTGGTGGCTAAAGAATTTCGTGGCCAACCACCGCAGCGCACTGGTGC 2794089

Qy 2101 TTTGGTGCTGTCCGAATTGCGGCGCGGCCACTGAGCTGACCGGTGCGTATTTATGCAA 2160
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 Db 2794090 TTTGGTGCTGTCCGAATTGCGGCGCGGCCACTGAGCTGACCGGTGCGTATTTATGCAA 2794149

Qy 2161 CCCATTTGATGTGGAATCCATCAAACGGCAAATGGTGGCAGCTGTCCATGATTGGAAGCA 2220
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 Db 2794150 CCCATTTGATGTGGAATCCATCAAACGGCAAATGGTGGCAGCTGTCCATGATTGGAAGCA 2794209

Qy 2221 CAATCCGGAATCTGCGGCAACGCGAATGAAAACGAACAGCGAGCAGGTCTATACCCACGA 2280
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 Db 2794210 CAATCCGGAATCTGCGGCAACGCGAATGAAAACGAACAGCGAGCAGGTCTATACCCACGA 2794269

Qy 2281 CGTCAACGTGTGGGCTAATAGTTTCCTGGATTGTTTGGCACAGTCGGGAGAAAACCTCATG 2340
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 Db 2794270 CGTCAACGTGTGGGCTAATAGTTTCCTGGATTGTTTGGCACAGTCGGGAGAAAACCTCATG 2794329

Qy 2341 AACCGCGCACGAATCGCGACCATAGGCGTTCTTCCGCTTGCTTTACTGCTGGCGTCTGT 2400
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 Db 2794330 AACCGCGCACGAATCGCGACCATAGGCGTTCTTCCGCTTGCTTTACTGCTGGCGTCTGT 2794389

Qy 2401 GGTTTCAGACACCGTGGAAATGACAGATTCACCTGGTGGTGACCAATATTTACACCGAT 2460
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 Db 2794390 GGTTTCAGACACCGTGGAAATGACAGATTCACCTGGTGGTGACCAATATTTACACCGAT 2794449

Qy 2461 CCAGATGAGTCGAATTCGATCAGTAATCTTGTCAATTTCCAGCCCAGCTTAGATTTTGGC 2520
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 Db 2794450 CCAGATGAGTCGAATTCGATCAGTAATCTTGTCAATTTCCAGCCCAGCTTAGATTTTGGC 2794509

Qy 2521 AATTCTTCCCTGTCTGGTTTCACTGGCTGTGTGCCTTTTACGGGGCGTGCGGAATTCTTC 2580
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 Db 2794510 AATTCTTCCCTGTCTGGTTTCACTGGCTGTGTGCCTTTTACGGGGCGTGCGGAATTCTTC 2794569

Qy 2581 CAAAATGGTGAGCAAAGCTCTGTCTGGATGCCGATTATGTGACCTTGTCTTCCCTGGAT 2640
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 Db 2794570 CAAAATGGTGAGCAAAGCTCTGTCTGGATGCCGATTATGTGACCTTGTCTTCCCTGGAT 2794629

Qy 2641 TTCGATAAACTTCCCAGATGATTGCCAAGGACAAGAACTCAAAGTTCATAACGAGCTGGTT 2700
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 Db 2794630 TTCGATAAACTTCCCAGATGATTGCCAAGGACAAGAACTCAAAGTTCATAACGAGCTGGTT 2794689

Qy 2701 GATCTTCTGCCTGGTTCTTTTGAAATCTCCAGGACTTCTGGTTTCAGAAATCTTGCTGACT 2760
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Qy 2761 AGCGATGTCGATGAATCGATCGGCCAGCAATCCGCTTGGTGTCTGGATCGCGCCGACA 2820
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 Db 2794750 AGCGATGTCGATGAATCGATCGGCCAGCAATCCGCTTGGTGTCTGGATCGCGCCGACA 2794809

Qy 2821 TCTTAAGGTGCCAGGGCTTTAAAGTGCCAGGGGTTCTGTGGGATCCGTACACTGGTTCCC 2880
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 Db 2794810 TCTTAAGGTGCCAGGGCTTTAAAGTGCCAGGGGTTCTGTGGGATCCGTACACTGGTTCCC 2794869

Qy 2881 ATGACTTTGACTATTGAGGAAATCGCCAAGACCAAAAAGCTTTTGGTTGTGTCCGATTTT 2940
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 Db 2794870 ATGACTTTGACTATTGAGGAAATCGCCAAGACCAAAAAGCTTTTGGTTGTGTCCGATTTT 2794929

Qy 2941 GATGGAACCATCGCAGGATTTAGCAAGGACGCTTACAACGTTCTATCAACCAGAAATCC 3000
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 Db 2794930 GATGGAACCATCGCAGGATTTAGCAAGGACGCTTACAACGTTCTATCAACCAGAAATCC 2794989

Qy 3001 CTCAAGGCGG 3010
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 Db 2794990 CTCAAGGCGG 2794999

Alignment

US-09-895-382-29

; Sequence 29, Application US/09895382

; Patent No. US20020137150A1

; GENERAL INFORMATION:

; APPLICANT: OHTAKI, HIROMI

; APPLICANT: NAKAMURA, JUN

; APPLICANT: IZUI, HIROSHI

; APPLICANT: NAKAMATSU, TSUYOSHI

; TITLE OF INVENTION: BACTERIUM PRODUCING L-GLUTAMIC ACID AND METHOD FOR PRODUCING L-GLUTAMIC

; TITLE OF INVENTION: ACID

; FILE REFERENCE: 210213US0

; CURRENT APPLICATION NUMBER: US/09/895,382

; CURRENT FILING DATE: 2001-07-02

; PRIOR APPLICATION NUMBER: JP 2000-204256

; PRIOR FILING DATE: 2000-07-05

Query Match 77.3%; Score 2326.6; DB 10; Length 2369;

Best Local Similarity 99.7%; Pred. No. 0;

Matches 2363; Conservative 0; Mismatches 4; Indels 4; Gaps 3;

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Qy      400 CAGAATCAGCGCCGGCAGAGAAAACGTCCAAAGACTAATCAGAGATTCGGTAATAAAAGG 459
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Qy      460 TAAAAATCAACCTGCTTAGGCGTCTTTCGCTTAAATAGCGTAGAATATCGGGTCGATCGC 519
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Db      59 TAAAAATCAACCTGCTTAGGCGTCTTTCGCTTAAATAGCGTAGAATATCGGGTCGATCGC 118

Qy      520 TTTTAAACACTCAGGAGGATCCTTGCCGGCCAAAATCACGGACACTCGTCCCACCCAGAG 579
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Db      119 TTTTAAACACTCAGGAGGATCCTTGCCGGCCAAAATCACGGACACTCGTCCCACCCAGAG 178

Qy      580 ATCCCTTCACGCTGTTGAAGAGGAAACCGCAGCCGGTGCCCGCAGGATTGTTGCCACCTA 639
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Db      179 ATCCCTTCACGCTGTTGAAGAGGAAACCGCAGCCGGTGCCCGCAGGATTGTTGCCACCTA 238

Qy      640 TTCTAAGGACTTCTTCGACGGCGTCACTTTGATGTGCATGCTCGGCGTTGAACCTCAGGG 699
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Db      239 TTCTAAGGACTTCTTCGACGGCGTCACTTTGATGTGCATGCTCGGCGTTGAACCTCAGGG 298

Qy      700 CCTGCGTTACACCAAGGTCGCTTCTGAACACGAGGAAGCTCAGCCAAAGAAGGCTACAAA 759
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Db      299 CCTGCGTTACACCAAGGTCGCTTCTGAACACGAGGAAGCTCAGCCAAAGAAGGCTACAAA 358

Qy      760 GCGGACTCGTAAGGC-ACCAGCTAAGAAGGCTGCTGCTAAGAAAACGACCAAGAAGACCA 818
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Db      359 GCGGACTCGTAAGGCTACCAGCTAAGAAGGCTGCTGCTAAGAAAACGACCAAGAAGACCA 418

Qy      819 CTAAGAAAACCTACTAAAAAGACCACCGCAAAGAAGACCACAAAGAAGTCTTAAGCCGGAT 878
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Db      419 CTAAGAAAACCTACTAAAAAGACCACCGCAAAGAAGACCACAAAGAAGTCTTAAGCCGGAT 478

Qy      879 CTTATATGGATGATTCCAATAGCTTTGTAGTTGTTGCTAACCCTCTGCCAGTGGATATGA 938
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Db      479 CTTATATGGATGATTCCAATAGCTTTGTAGTTGTTGCTAACCCTCTGCCAGTGGATATGA 538

Qy      939 CTGTCCACCCAGATGGTAGCTATAGCATCTCCCCAGCCCCGGTGGCCTTGTCACGGGGC 998
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Db      539 CTGTCCACCCAGATGGTAGCTATAGCATCTCCCCAGCCCCGGTGGCCTTGTCACGGGGC 598

Qy      999 TTTCCCCCGTTCTGGAACAACATCGTGGATGTTGGGTGGATGGCCTGGAACGTAGATG 1058
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Db      599 TTTCCCCCGTTCTGGAACAACATCGTGGATGTTGGGTGGATGGCCTGGAACGTAGATG 658

Qy      1059 TTGCACCCGAACCATTTTGAACAGATACGGGTGTTTGTGTCACCCCTGTTGTCCTCACTG 1118
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Db      659 TTGCACCCGAACCATTTTGAACAGATACGGGTGTTTGTGTCACCCCTGTTGTCCTCACTG 718

Qy      1119 CAAGTGACTATGAAGGCTTCTACGAGGGCTTTTCAAACGCAACGCTGTGGCCTCTTTTCC 1178
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Db      719 CAAGTGACTATGAAGGCTTCTACGAGGGCTTTTCAAACGCAACGCTGTGGCCTCTTTTCC 778
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Qy 1179 ACGATCTGATTGTTACTCCGGTGTACAACACCGATTGGTGGCATGCGTTTCGGGAGGTAA 1238
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Qy 1239 ACCTCAAGTTCGCTGAAGCCGTGAGCCAAGTGGCGGCACACGGTGCCACTGTGTGGGTGC 1298
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 Db 839 ACCTCAAGTTCGCTGAAGCCGTGAGCCAAGTGGCGGCACACGGTGCCACTGTGTGGGTGC 898
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Qy 1299 AGGACTATCAGCTGTGTGCTGGTTCCTGGCATTTTGCGCCAGATGCGCCCTGATTGAAGA 1358
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 Db 899 AGGACTATCAGCTGTGTGCTGGTTCCTGGCATTTTGCGCCAGATGCGCCCTGATTGAAGA 958
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Qy 1359 TCGGTTTCTTCTCCACATTCCCTTCCCTTCCCTGATCTGTTCGGTCAGCTGCCGTGGC 1418
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 Db 959 TCGGTTTCTTCTCCACATTCCCTTCCCTTCCCTGATCTGTTCGGTCAGCTGCCGTGGC 1018
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Qy 1419 GTGAAGAGATTGTTTCGAGGCATGCTGGGCGCAGATTGGTGGGATTCCATTTGGTTCAAA 1478
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 Db 1019 GTGAAGAGATTGTTTCGAGGCATGCTGGGCGCAGATTGGTGGGATTCCATTTGGTTCAAA 1078
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Qy 1479 ACGCAGAAAACCTTCCTTGCCTTAACCCAGCAGGTTGCCGGCACTGCCGGGTCTCATGTGG 1538
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 Db 1079 ACGCAGAAAACCTTCCTTGCCTTAACCCAGCAGGTTGCCGGCACTGCCGGGTCTCATGTGG 1138
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Qy 1539 GTCAGCCGGACACCTTGCAGGTCAGTGGTGAAGCATTGGTGCCTGAGATTGGCGCTCATG 1598
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 Db 1139 GTCAGCCGGACACCTTGCAGGTCAGTGGTGAAGCATTGGTGCCTGAGATTGGCGCTCATG 1198
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Qy 1599 TTGAAACCGCTGACGGAAGGCGAGTTAGCGTCGGGGCGTTCCCGATCTCGATTGATGTTG 1658
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 Db 1199 TTGAAACCGCTGACGGAAGGCGAGTTAGCGTCGGGGCGTTCCCGATCTCGATTGATGTTG 1258
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Qy 1659 AAATGTTTGGGGAGGCGTCGAAAAGCGCGTTCCTTGATCTTTTAAAAACGCTCGACGAGC 1718
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Qy 1779 TGCTTGCCTTTGAGGAACGCTGGAATCCGGCGCGTTGGAGGCCGACAAAGCTGTGTTGC 1838
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 Db 1379 TGCTTGCCTTTGAGGAACGCTGGAATCCGGCGCGTTGGAGGCCGACAAAGCTGTGTTGC 1438
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Qy 1839 TGCAGGTCGCGACGCCCTTCGCGTGAGCGCATTGATCACTATCGTGTGTCGCGTTCGCAGG 1898
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 Db 1439 TGCAGGTCGCGACGCCCTTCGCGTGAGCGCATTGATCACTATCGTGTGTCGCGTTCGCAGG 1498
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Qy 1899 TCGAGGAAGCCGTTCGCGCGTATCAATGGTCGTTTCGGTCGCATGGGGCGTCCCGTGGTGC 1958
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 Db 1499 TCGAGGAAGCCGTTCGCGCGTATCAATGGTCGTTTCGGTCGCATGGGGCGTCCCGTGGTGC 1558
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Qy 1959 ATTATCTACACAGGTCATTGAGCAAAAATGATCTCCAGGTGCTGTATACCGCAGCCGATG 2018
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 Db 1559 ATTATCTACACAGGTCATTGAGCAAAAATGATCTCCAGGTGCTGTATACCGCAGCCGATG 1618
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Qy 2019 TCATGCTGGTTACGCCCTTTTAAAGACGGTATGAACCTGGTGGCTAAAGAAATTCGTGGCCA 2078
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 Db 1619 TCATGCTGGTTACGCCCTTTTAAAGACGGTATGAACCTGGTGGCTAAAGAAATTCGTGGCCA 1678
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Qy 2079 ACCACCGCGACGGCACTGGTGCTTTGGTGCTGTCCGAATTTGCCGGCGCGGCCACTGAGC 2138
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 Db 1679 ACCACCGCGACGGCACTGGTGCTTTGGTGCTGTCCGAATTTGCCGGCGCGGCCACTGAGC 1738
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Qy 2139 TGACCGGTGCGTATTTATGCAACCCATTGATGTGGAATCCATCAAACGGCAAATGGTGG 2198
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 Db 1739 TGACCGGTGCGTATTTATGCAACCCATTGATGTGGAATCCATCAAACGGCAAATGGTGG 1798
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Qy 2199 CAGCTGTCCATGATTGTAAGCACAATCCGGAATCTGCGGCAACGGAATGAAAACGAACA 2258
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 Db 1799 CAGCTGTCCATGATTGTAAGCACAATCCGGAATCTGCGGCAACGGAATGAAAACGAACA 1858
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Qy 2259 GCGAGCAGGCTATATCCACGACGTCAACGTGTGGGCTAATAGTTTCTTGGATTGTTTGG 2318
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 Db 1859 GCGAGCAGGCTATATCCACGACGTCAACGTGTGGGCTAATAGTTTCTTGGATTGTTTGG 1918
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Qy 2319 CACAGTCGGGAGAAAACTCATGAACCGCGCACGAATCGCGACCATAGGCGTTCTTCCGCT 2378
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 Db 1919 CGCAGTCGGGAGAAAACTCATGAACCGCGCACGAATCGCGACCATAGGCGTTCTTCCGCT 1978
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Qy 2379 TGCTTTACTGCTGGCGTCCTGTGGTTCAGACACCGTGGAAATGACAGATTCCACCTGGTT 2438
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Db 1979 TGCTTTACTGCTGGCGTCCTGTGGTTCAGACACCGTGGAAATGACAGATTCCACCTGGTT 2038

Qy 2439 GGTGACCAATATTTACACCGATCCAGATGAGTCGAATTCGATCAGTAATCTTGTCATTTT 2498
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Db 2039 GGTGACCAATATTTACACCGATCCAGATGAGTCGAATTCGATCAGTAATCTTGTCATTTT 2098

Qy 2499 CCAGCCCAGCTTAGATTTTGGCAATTCTTCCCTGTCTGGTTTCACTGGCTGTGTGCCTTT 2558
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Db 2099 CCAGCCCAGCTTAGATTTTGGCAATTCTTCCCTGTCTGGTTTCACTGGCTGTGTGCCTTT 2158

Qy 2559 TACGGGGCGTGCGGAATTCTTCCAAAATGGTGAGCAAAGCTCTGTTCTGGATGCCGATTA 2618
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Db 2159 TACGGGGCGTGCGGAATTCTTCCAAAATGGTGAGCAAAGCTCTGTTCTGGATGCCGATTA 2218

Qy 2619 TGTGACCTTGTCTTCCCTGGATTTTCGATAAACTTCCCGATGATTGCCAAGGACAAGAACT 2678
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Db 2219 TGTGACCTTGTCTTCCCTGGATTTTCGATAAACTTCCCGATGATTGCCAAGGACAAGAACT 2278

Qy 2679 CAAAGTTCATAACGAGCTGGTTGATCTTCTGCCTGGTTCTTTTGAATCTCCAGGACTTC 2738
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Db 2279 CAAAGTTCATAACGAGCTGGTTGATCTTCTGCCTGGTTCTTTTGAATCTCCAGGACTTC 2338

Qy 2739 TGGTTCAGAAATCTTGCTGACTAGCGATGTC 2769
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Db 2339 TGGTTCAGAAATCTTGCTGACTAGCGATGTC 2369

; Sequence 1, Application US/09431099
; Patent No. 6410705
; GENERAL INFORMATION:
; APPLICANT: Degussa-Höls AG
; APPLICANT: Forschungszentrum-Jölich GmbH
; TITLE OF INVENTION: New nucleotide sequences coding for the thrE gene and
process for the
; TITLE OF INVENTION: enzymatic production of L-threonine with coryneform
bacteria.

Query Match 46.7%; Score 1405.6; DB 4; Length 2817;
Best Local Similarity 99.7%; Pred. No. 0;
Matches 1408; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy	1	ATTGCGGGGCTTACTGCGCTGATGGGTTCTGCGTTTATTACCTCTTCGTTGTTTATTTA	60
Db	1406	ATTGCGGGGCTTACTGCGCTGATGGGTTCTGCGTTTATTACCTCTTCGTTGTTTATTTA	1465
Qy	61	GGCCCCGTCTCTGCCGCTGCGATTGCTGCAACAGCAGTTGGTTTCACTGGTGGTTTGCTT	120
Db	1466	GGCCCCGTCTCTGCCGCTGCGATTGCTGCAACAGCAGTTGGTTTCACTGGTGGTTTGCTT	1525
Qy	121	GCCCGTCGATTCTTGATTCCACCGTTGATTGTGGCGATTGCCGGCATCACACCAATGCTT	180
Db	1526	GCCCGTCGATTCTTGATTCCACCGTTGATTGTGGCGATTGCCGGCATCACACCAATGCTT	1585
Qy	181	CCAGGTCTAGCAATTTACCGCGGAATGTACGCCACCTGAATGATCAAACACTCATGGGT	240
Db	1586	CCAGGTCTAGCAATTTACCGCGGAATGTACGCCACCTGAATGATCAAACACTCATGGGT	1645
Qy	241	TTCACCAACATTGCGGTTGCTTTAGCCACTGCTTCATCACTTGCCGCTGGCGTGGTTTTG	300
Db	1646	TTCACCAACATTGCGGTTGCTTTAGCCACTGCTTCATCACTTGCCGCTGGCGTGGTTTTG	1705
Qy	301	GGTGAGTGGATTGCCCCGAGGCTACGTCGTCCACCACGCTTCAACCCATACCGTGCATTT	360
Db	1706	GGTGAGTGGATTGCCCCGAGGCTACGTCGTCCACCACGCTTCAACCCATACCGTGCATTT	1765
Qy	361	ACCAAGGCGAATGAGTTCTCCTTCCAGGAGGAAGCTGAGCAGAATCAGCGCCGGCAGAGA	420
Db	1766	ACCAAGGCGAATGAGTTCTCCTTCCAGGAGGAAGCTGAGCAGAATCAGCGCCGGCAGAGA	1825
Qy	421	AAACGTCCAAAGACTAATCAGAGATTCCGGTAATAAAAAGGTAAAAATCAACCTGCTTAGGC	480
Db	1826	AAACGTCCAAAGACTAATCAAAGATTCCGGTAATAAAAAGGTAAAAATCAACCTGCTTAGGC	1885
Qy	481	GTCTTTTCGCTTAAATAGCGTAGAATATCGGGTCGATCGCTTTTAAACACTCAGGAGGATC	540
Db	1886	GTCTTTTCGCTTAAATAGCGTAGAATATCGGGTCGATCGCTTTTAAACACTCAGGAGGATC	1945
Qy	541	CTTGCCGGCCAAAATCACGGACACTCGTCCCACCCAGAATCCCTTCACGCTGTTGAAGA	600
Db	1946	CTTGCCGGCCAAAATCACGGACACTCGTCCCACCCAGAATCCCTTCACGCTGTTGAAGA	2005
Qy	601	GGAAACCGCAGCCGGTGCCCGCAGGATTGTTGCCACCTATTCTAAGGACTTCTTCGACGG	660
Db	2006	GGAAACCGCAGCCGGTGCCCGCAGGATTGTTGCCACCTATTCTAAGGACTTCTTCGACGG	2065

Qy	661	CGTCACTTTGATGTGCATGCTCGGCGTTGAACCTCAGGGCCTGCGTTACACCAAGGTCGC	720
Db	2066	CGTCACTTTGATGTGCATGCTCGGCGTTGAACCTCAGGGCCTGCGTTACACCAAGGTCGC	2125
Qy	721	TTCTGAACACGAGGAAGCTCAGCCAAAGAAGGCTACAAAGCGGACTCGTAAGGCACCAGC	780
Db	2126	TTCTGAACACGAGGAAGCTCAGCCAAAGAAGGCTACAAAGCGGACTCGTAAGGCACCAGC	2185
Qy	781	TAAGAAGGCTGCTGCTAAGAAAACGACCAAGAAGACCCTAAGAAACTACTAAAAAGAC	840
Db	2186	TAAGAAGGCTGCTGCTAAGAAAACGACCAAGAAGACCCTAAGAAACTACTAAAAAGAC	2245
Qy	841	CACCGCAAAGAAGACCACAAAGAAGTCTTAAGCCGGATCTTATATGGATGATTCCAATAG	900
Db	2246	CACCGCAAAGAAGACCACAAAGAAGTCTTAAGCCGGATCTTATATGGATGATTCCAATAG	2305
Qy	901	CTTTGTAGTTGTTGCTAACCGTCTGCCAGTGGATATGACTGTCCACCCAGATGGTAGCTA	960
Db	2306	CTTTGTAGTTGTTGCTAACCGTCTGCCAGTGGATATGACTGTCCACCCAGATGGTAGCTA	2365
Qy	961	TAGCATCTCCCCCAGCCCCGGTGGCCTTGTCACGGGGCTTTCCCCCGTTCTGGAACAACA	1020
Db	2366	TAGCATCTCCCCCAGCCCCGGTGGCCTTGTCACGGGGCTTTCCCCCGTTCTGGAACAACA	2425
Qy	1021	TCGTGGATGTTGGGTCGGATGGCCTGGAACGTAGATGTTGCACCCGAACCATTTTGAAC	1080
Db	2426	TCGTGGATGTTGGGTCGGATGGCCTGGAACGTAGATGTTGCACCCGAACCATTTTGAAC	2485
Qy	1081	AGATACGGGTGTTTGTGCTGCACCCTGTTGTCTCACTGCAAGTGACTATGAAGGCTTCTA	1140
Db	2486	AGATACGGGTGTTTGTGCTGCACCCTGTTGTCTCACTGCAAGTGACTATGAAGGCTTCTA	2545
Qy	1141	CGAGGGCTTTTCAAACGCAACGCTGTGGCCTCTTTTCCACGATCTGATTGTTACTCCGGT	1200
Db	2546	CGAGGGCTTTTCAAACGCAACGCTGTGGCCTCTTTTCCACGATTTGATTGTTACTCCGGT	2605
Qy	1201	GTACAACACCGATTGGTGGCATGCGTTTCGGGAGGTAAACCTCAAGTTCGCTGAAGCCGT	1260
Db	2606	GTACAACACCGATTGGTGGCATGCGTTTCGGGAGGTAAACCTCAAGTTCGCTGAAGCCGT	2665
Qy	1261	GAGCCAAGTGGCGGCACACGGTGCCACTGTGTGGGTGCAGGACTATCAGCTGTTGCTGGT	1320
Db	2666	GAGCCAAGTGGCGGCACACGGTGCCACTGTGTGGGTGCAGGACTATCAGCTGTTGCTGGT	2725
Qy	1321	TCCTGGCATTTTGCGCCAGATGCGCCCTGATTTGAAGATCGGTTTCTTCTCCACATTCC	1380
Db	2726	TCCTGGCATTTTGCGCCAGATGCGCCCTGATTTGAAGATCGGTTTCTTCTCCACATTCC	2785
Qy	1381	CTTCCCTTCCCCTGATCTGTTCCGTCAGCTGC	1412
Db	2786	CTTCCCTTCCCCTGATCTGTTCCGTCAGCTGC	2817

AX063735

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ACCESSION AX063735
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SOURCE Corynebacterium glutamicum
ORGANISM Corynebacterium glutamicum
Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales;
Corynebacterineae; Corynebacteriaceae; Corynebacterium.
AUTHORS Pompejus, M., Kroeger, B., Schroeder, H., Zelder, O. and Haberhauer, G.
TITLE corynebacterium glutamicum genes encoding metabolic pathway
proteins
JOURNAL Patent: WO 0100843-A 17 04-JAN-2001;

Query Match 52.4%; Score 1578; DB 6; Length 1578;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 1578; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	784	GAAGGCTGCTGCTAAGAAAACGACCAAGAAGACCACTAAGAAAACACTACTAAAAAGACCAC	843
Db	1	GAAGGCTGCTGCTAAGAAAACGACCAAGAAGACCACTAAGAAAACACTACTAAAAAGACCAC	60
Qy	844	CGCAAAGAAGACCACAAAGAAGTCTTAAGCCGGATCTTATATGGATGATTCCAATAGCTT	903
Db	61	CGCAAAGAAGACCACAAAGAAGTCTTAAGCCGGATCTTATATGGATGATTCCAATAGCTT	120
Qy	904	TGTAGTTGTTGCTAACCGTCTGCCAGTGGATATGACTGTCCACCCAGATGGTAGCTATAG	963
Db	121	TGTAGTTGTTGCTAACCGTCTGCCAGTGGATATGACTGTCCACCCAGATGGTAGCTATAG	180
Qy	964	CATCTCCCCCAGCCCCGGTGGCCTTGTCACGGGGCTTTCCCCCGTTCTGGAACAACATCG	1023
Db	181	CATCTCCCCCAGCCCCGGTGGCCTTGTCACGGGGCTTTCCCCCGTTCTGGAACAACATCG	240
Qy	1024	TGGATGTTGGGTCGGATGGCCTGGAAGTGTAGATGTTGCACCCGAACCATTTTGAACAGA	1083
Db	241	TGGATGTTGGGTCGGATGGCCTGGAAGTGTAGATGTTGCACCCGAACCATTTTGAACAGA	300
Qy	1084	TACGGGTGTTTTGCTGCACCCTGTTGTCTCACTGCAAGTGACTATGAAGGCTTCTACGA	1143
Db	301	TACGGGTGTTTTGCTGCACCCTGTTGTCTCACTGCAAGTGACTATGAAGGCTTCTACGA	360
Qy	1144	GGGCTTTTCAAACGCAACGCTGTGGCCTCTTTTCCACGATCTGATTGTTACTCCGGTGTA	1203
Db	361	GGGCTTTTCAAACGCAACGCTGTGGCCTCTTTTCCACGATCTGATTGTTACTCCGGTGTA	420
Qy	1204	CAACACCGATTGGTGGCATGCGTTTTCGGGAGGTAAACCTCAAGTTCGCTGAAGCCGTGAG	1263
Db	421	CAACACCGATTGGTGGCATGCGTTTTCGGGAGGTAAACCTCAAGTTCGCTGAAGCCGTGAG	480
Qy	1264	CCAAGTGGCGGCACACGGTGCCACTGTGTGGGTGCAGGACTATCAGCTGTTGCTGGTTCC	1323
Db	481	CCAAGTGGCGGCACACGGTGCCACTGTGTGGGTGCAGGACTATCAGCTGTTGCTGGTTCC	540
Qy	1324	TGGCATTTTGCGCCAGATGCGCCCTGATTTGAAGATCGGTTTCTTCTCCACATTCCCTT	1383
Db	541	TGGCATTTTGCGCCAGATGCGCCCTGATTTGAAGATCGGTTTCTTCTCCACATTCCCTT	600

Qy	1384	CCCTTCCCCTGATCTGTTCCGTCAGCTGCCGTGGCGTGAAGAGATTGTTTCGAGGCATGCT	1443
Db	601	CCCTTCCCCTGATCTGTTCCGTCAGCTGCCGTGGCGTGAAGAGATTGTTTCGAGGCATGCT	660
Qy	1444	GGGCGCAGATTTGGTGGGATTCCATTTGGTTCAAAACGCAGAAAACCTTCCTTGCGTTAAC	1503
Db	661	GGGCGCAGATTTGGTGGGATTCCATTTGGTTCAAAACGCAGAAAACCTTCCTTGCGTTAAC	720
Qy	1504	CCAGCAGGTTGCCGGCACTGCCGGGTCTCATGTGGGTCAGCCGGACACCTTGCAGGTCAG	1563
Db	721	CCAGCAGGTTGCCGGCACTGCCGGGTCTCATGTGGGTCAGCCGGACACCTTGCAGGTCAG	780
Qy	1564	TGGTGAAGCATTGGTGCGTGAGATTGGCGCTCATGTTGAAACCGCTGACGGAAGGCGAGT	1623
Db	781	TGGTGAAGCATTGGTGCGTGAGATTGGCGCTCATGTTGAAACCGCTGACGGAAGGCGAGT	840
Qy	1624	TAGCGTCGGGGCGTTCCCGATCTCGATTGATGTTGAAATGTTTGGGGAGGCGTCGAAAAG	1683
Db	841	TAGCGTCGGGGCGTTCCCGATCTCGATTGATGTTGAAATGTTTGGGGAGGCGTCGAAAAG	900
Qy	1684	CGCCGTTCTTGATCTTTTAAAAACGCTCGACGAGCCGGAACCGTATTCCTGGGCGTTGA	1743
Db	901	CGCCGTTCTTGATCTTTTAAAAACGCTCGACGAGCCGGAACCGTATTCCTGGGCGTTGA	960
Qy	1744	CCGACTGGACTACACCAAGGGCATTGTCAGCGCCTGCTTGCGTTTGAGGAACTGCTGGA	1803
Db	961	CCGACTGGACTACACCAAGGGCATTGTCAGCGCCTGCTTGCGTTTGAGGAACTGCTGGA	1020
Qy	1804	ATCCGGCGCGTTGGAGGCCGACAAAGCTGTGTTGCTGCAGGTCGCGACGCCTTCGCGTGA	1863
Db	1021	ATCCGGCGCGTTGGAGGCCGACAAAGCTGTGTTGCTGCAGGTCGCGACGCCTTCGCGTGA	1080
Qy	1864	GCGCATTGATCACTATCGTGTGTCGCGTTTCGCAGGTCGAGGAAGCCGTCGGCCGTATCAA	1923
Db	1081	GCGCATTGATCACTATCGTGTGTCGCGTTTCGCAGGTCGAGGAAGCCGTCGGCCGTATCAA	1140
Qy	1924	TGGTCGTTTCGGTCGCGATGGGGCGTCCCGTGGTGCATTATCTACACAGGTCATTGAGCAA	1983
Db	1141	TGGTCGTTTCGGTCGCGATGGGGCGTCCCGTGGTGCATTATCTACACAGGTCATTGAGCAA	1200
Qy	1984	AAATGATCTCCAGGTGCTGTATACCGCAGCCGATGTCATGCTGGTTACGCCTTTTAAAGA	2043
Db	1201	AAATGATCTCCAGGTGCTGTATACCGCAGCCGATGTCATGCTGGTTACGCCTTTTAAAGA	1260
Qy	2044	CGGTATGAACTTGGTGGCTAAAGAATTCGTGGCCAACCACCGCGACGGCACTGGTGCTTT	2103
Db	1261	CGGTATGAACTTGGTGGCTAAAGAATTCGTGGCCAACCACCGCGACGGCACTGGTGCTTT	1320
Qy	2104	GGTGCTGTCCGAATTTGCCGGCGCGGCCACTGAGCTGACCGGTGCGTATTTATGCAACCC	2163
Db	1321	GGTGCTGTCCGAATTTGCCGGCGCGGCCACTGAGCTGACCGGTGCGTATTTATGCAACCC	1380
Qy	2164	ATTTGATGTGGAATCCATCAAACGGCAAATGGTGGCAGCTGTCCATGATTTGAAGCACAA	2223
Db	1381	ATTTGATGTGGAATCCATCAAACGGCAAATGGTGGCAGCTGTCCATGATTTGAAGCACAA	1440

Qy	2224	TCCGGAATCTGCGGCAACGCGAATGAAAACGAACAGCGAGCAGGTCTATACCCACGACGT	2283
Db	1441	TCCGGAATCTGCGGCAACGCGAATGAAAACGAACAGCGAGCAGGTCTATACCCACGACGT	1500
Qy	2284	CAACGTGTGGGCTAATAGTTTCCCTGGATTGTTTGGCACAGTCGGGAGAAAACTCATGAAC	2343
Db	1501	CAACGTGTGGGCTAATAGTTTCCCTGGATTGTTTGGCACAGTCGGGAGAAAACTCATGAAC	1560
Qy	2344	CGCGCACGAATCGCGACC	2361
Db	1561	CGCGCACGAATCGCGACC	1578